ORDER NO. AD9005103C2

Service Manual

Stereo Integrated Amplifier

Amplifier

SU-V670

Color

(K) ..... Black Type

Area

Country Code	Areas	Color
(E)	Continental Europe	(K)
(EB)	Great Britain	(K)
(EG)	F.R. Germany & Italy	(K)

SPECIFICATIONS

(DIN 45 500)

20 Hz~20 kHz continuous power output	
both channels driven	2 × 85 W (8 Ω)
1 kHz continuous power output	
both channels driven (THD: 1 %)	2 × 95 W (8 Ω)
	2 × 135 W (4 Ω)
63 Hz~12.5 kHz continuous power output	
both channels driven (0.7 %)	2 × 85 W (8 Ω)
	2 × 120 W (4 Ω)
Total harmonic distortion (Power Amp Direct input)	
rated power at 20 Hz~20 kHz	0.005 % (8 Ω)
rated power at 1 kHz	0.0009 % (8 Ω)
	0.002 % (4 Ω)
half power at 20 Hz~20 kHz	0.005 % (8 Ω)
half power at 1 kHz	0.0009 % (8 Ω)
	0.002 % (4 Ω)
Intermodulation distortion	
rated power at 50 Hz: 7 kHz = 4:1, SMPTE, 8 Ω	0.007 %
Residual hum and noise	0.2 mV
Damping factor	60 (8 Ω), 30 (4 Ω)
Headphones output level and impedance	650 mV/330 Ω
Load impedance	
A or B	4 Ω~16 Ω
A and B	8 Ω~16 Ω
Input sensitivity and impedance	
PHONO MM	2.5 mV/47 kΩ
PHONO MC	170 μV/220 Ω
TUNER, CD, AUX, TAPE 1, TAPE 2/DAT	150 mV/22 kΩ
POWER AMP DIRECT	1 V/18 kΩ
Phono maximum input voltage (IHF '66, 1 kHz, RMS)	
MM	170 mV
MC	12 mV
S/N	
rated power (4 Ω)	
PHONO MM	79 dB (IHF '66: 86 dB)
PHONO MC	67 dB (IHF '66: 68 dB, S=250 μV)
TUNER, CD, AUX, TAPE 1, TAPE 2/DAT	97 dB (IHF '66: 100 dB)
POWER AMP DIRECT	106 dB (IHF '66: 115 dB)
−26 dB power (4 Ω)	
PHONO MM	77 dB
PHONO MC	67 dB
TUNER, CD, AUX, TAPE 1, TAPE 2/DAT	84 dB
50 mW power (4 Ω)	
PHONO MM	75 dB
PHONO MC	67 dB
TUNER, CD, AUX, TAPE 1, TAPE 2/DAT	78 dB
Frequency response	
PHONO MM	RIAA standard curve
	±0.8 dB (30 Hz~15 kHz)
TUNER, CD, AUX, TAPE 1, TAPE 2/DAT	
	3 Hz~100 kHz (+0, −3 dB)
	+0 dB, −0.2 dB (20 Hz~20 kHz)
POWER AMP DIRECT	2 Hz~120 kHz (+0, −3 dB)
	+0 dB, −0.2 dB (20 Hz~20 kHz)
Tone controls	
BASS	50 Hz, +10 dB, −10 dB
TREBLE	20 kHz, +10 dB, −10 dB
Loudness control (volume at −30 dB)	50 Hz, +9 dB
Output voltage	
TAPE 1, TAPE 2/DAT, REC OUT	150 mV
Channel balance, AUX 250 Hz~6,300 Hz	±1 dB
Channel separation, AUX 1 kHz	50 dB

GENERAL

Power consumption	640 W
Power supply	
For Great Britain:	AC 50 Hz/60 Hz, 240 V
For Others:	AC 50 Hz/60 Hz, 220 V
Dimensions (W × H × D)	430 × 158 × 370 mm
	(16-15/16" × 6-7/32" × 14-9/16")
Weight	12.3 kg (27.1 lb.)

Notes:

1. Specifications are subject to change without notice.
2. Weight and dimensions are approximate.
3. Total harmonic distortion is measured by the digital spectrum analyzer.

Technics

Matsushita Electric Industrial Co., Ltd.
Central P.O. Box 288, Osaka 530-91, Japan

■ CONTENTS

	Page
BEFORE REPAIR AND ADJUSTMENT	2
PROTECTION CIRCUITRY	2
ACCESSORY	2
CONNECTIONS	3, 4
LOCATION OF CONTROLS	5
DISASSEMBLY INSTRUCTIONS	6~9
MEASUREMENTS AND ADJUSTMENTS	10
SCHEMATIC DIAGRAM	11~13
WIRING CONNECTION DIAGRAM	14
PRINTED CIRCUIT BOARDS	15~18
TERMINAL GUIDE OF IC'S, TRANSISTORS AND DIODES	18
BLOCK DIAGRAM	19, 20
REPLACEMENT PARTS LIST	21, 22, 25, 26
EXPLODED VIEW	23, 24

■ BEFORE REPAIR AND ADJUSTMENT

(1) Turn off the power supply. Using a 10Ω, 10W resistor, shortcircuit both ends of power supply capacitors (C705,C706)in order to discharge the voltage.

(2) Before turning on the power switch of the unit.

A. Connect the voltage controller to the primary side.

B. Connect the AC ampere meter to the primary side or connect the DC voltage meter to the "±B" circuit of the secondary side.

C. Turn the VR of ICQ (VR451 and VR452) to minimum (counterclockwise).

D. After setting the output to zero of the voltage contoller,turn on the power switch of the unit. And increase the output of voltage controller gradually. Then, check carefully whether the current value of primary side become more than following value or whether the DC voltage of secondary side is increasing slowly.

E. If the value of current is increasing unusually or the DC voltage is not increasing,lower the output level of voltage contoller immediately.

- The current value of the primary side at no signal. (Confirm the power supply voltage of each area and provided voltage of the unit.)

Power supply voltage		AC 220 V	AC 240 V
Consumed current	50 Hz	120~360 mA	100~300 mA
	60 Hz	110~330 mA	90~280 mA

■ PROTECTION CIRCUITRY

The protection circuitry of the amplifier may have operated if either of the following conditions is noticed:

- No sound is heard when the power is turned on.
- Sound stops during a performance.

The function of this circuitry is to prevent circuitry damage if, for example, the positive and negative speaker connection wires are "shorted" , or if speaker systems with an impedance less than the indicated rated impedance of the amplifier are used.

If this occurs, follow the procedure outlined below:

1.Turn off the power.

2.Determine the cause of the problem and correctit.

3.Turn on the power once again.

Note:

When the protection circuitry functions, the unit will not operate unless the power is first turned off and then on again.

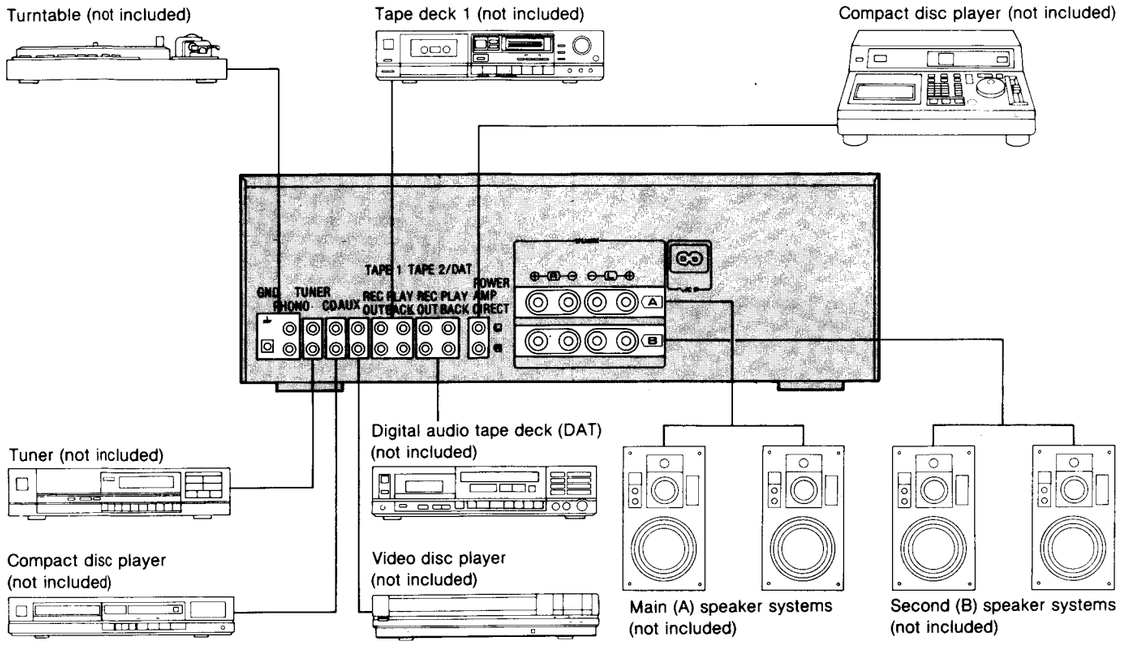
■ ACCESSORY

- AC power supply cord 1
  (SFDAC05E03) ..... For [E] and [EG] areas.
  (SJA193) ..... For [EB] area only.

■ CONNECTIONS

Using the short-circuit pins (included)
Shorting pins are inserted into the "PHONO" terminals to reduce noise. Remove the pins before connecting a turntable and reinsert the pins if the turntable is later disconnected. Never connect a shorting pin to a "REC OUT" terminal or any terminal other than those above.

System configurations


Turntable (not included)
Tape deck 1 (not included)
Compact disc player (not included)
TAPE 1 TAPE 2/DAT
GND PHONO TUNER CD AUX REC OUT PLAY BACK REC OUT PLAY BACK POWER AMP DIRECT
Tuner (not included)
Digital audio tape deck (DAT) (not included)
Compact disc player (not included)
Video disc player (not included)
Main (A) speaker systems (not included)
Second (B) speaker systems (not included)

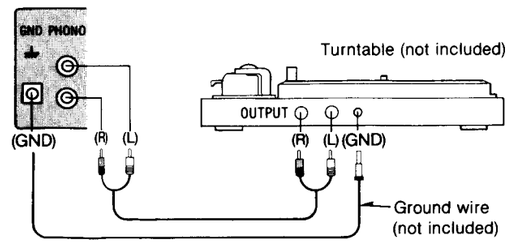
•Phono input capacitance is about 270 pF for EG area (about 100 pF for other areas).

To connect to each terminals

Make connections to each component in the system by using stereo connection cables (not included).

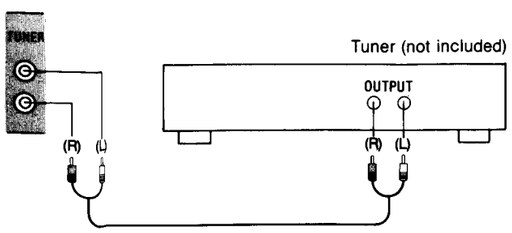
"PHONO" terminals

Connect a turntable. See "Using the short-circuit pins", above.



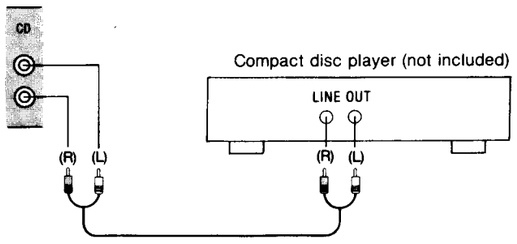
"TUNER" terminals

Connect a tuner.



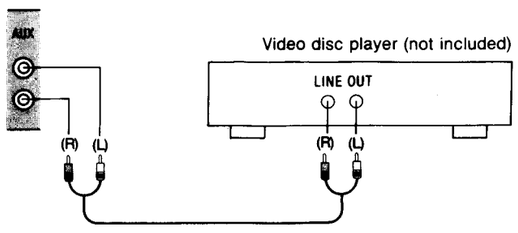
"CD" terminals

Connect a compact disc player.



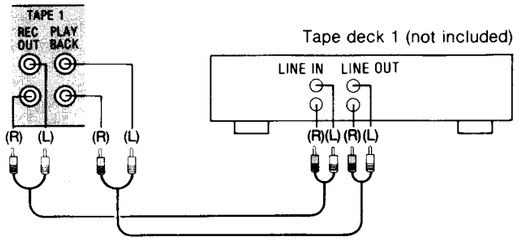
"AUX" terminals

Connect a component such as a video disc player (audio only connectable), etc.



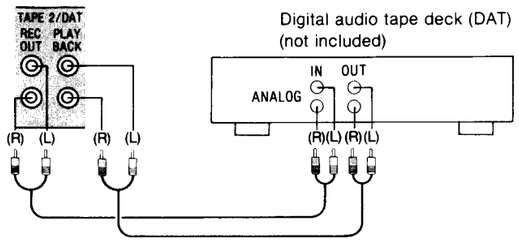
"TAPE 1" terminals

Connect a first tape deck.



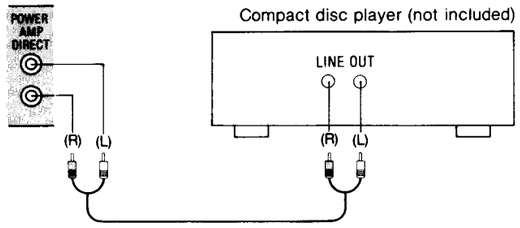
"TAPE 2/DAT" terminals

Connect a second tape deck or a digital audio tape deck (DAT).



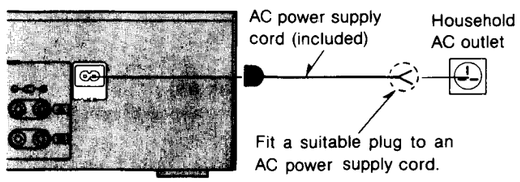
"POWER AMP DIRECT" terminals

Connect a compact disc player.
A superior level of tone quality can be obtained, because the signal from these terminals are sent directly to the volume control and power amp section of this unit.
The sounds from a component connected to these terminals cannot be recorded.



To connect the AC power supply cord (included)

Connect the AC power supply cord (included) after all other cables and cords are connected.



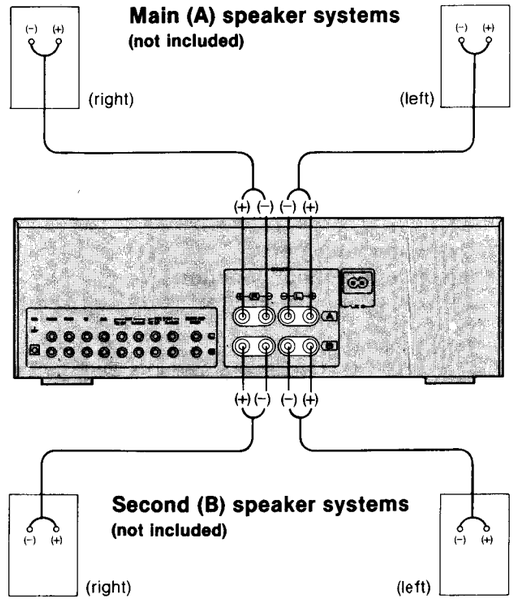
Connection to speaker systems

One pair of speaker systems can be connected to the "A" terminals of this unit and one pair to the "B" terminals.

■ Load impedance

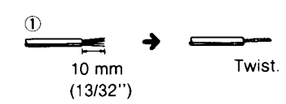
- When only the "A" or only the "B" terminals are used:4-16 ohms
- When both the "A" and the "B" terminals are used simultaneously:8-16 ohms

To connect main (A) and/or second (B) speaker systems



■ To connect cords to terminals

① Strip off the outer covering, and twist the center conductor.

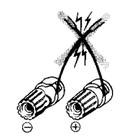


② Turn 5 or 6 times.

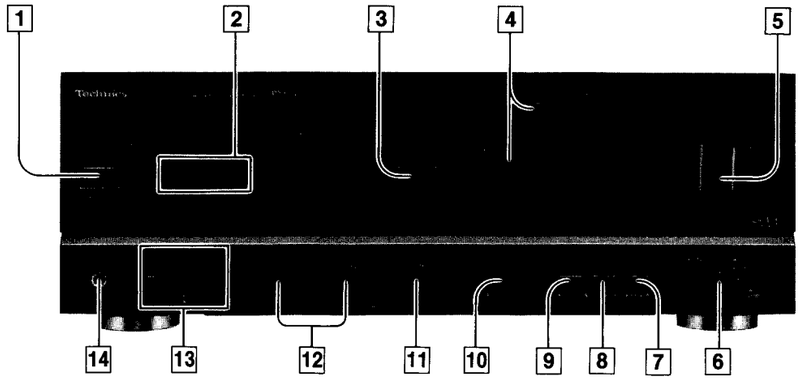
③ Insert the wire and tighten screw completely.
Pull the wire to assure a proper connection.

Note: Be sure to only connect positive (+) cords to positive (+) terminals, and negative (−) cords to negative (−) terminals.

Note:
To prevent damage to circuitry, never short-circuit the plus (+) and minus (−) speaker terminals.



■ LOCATION OF CONTROLS



1 Power switch (power)

2 Operation indicators (amplifier operation monitor)

This indicator illuminates to indicate the operating condition of this unit.

voltage control:

When the power is switched ON, this indicator illuminates when the unit is in the operation condition.

current drive:

When the power is switched ON, this indicator illuminates after about 4 seconds when the unit is in the operation condition.

If an abnormal condition in the circuitry is detected, such as DC voltage appearing in the output, or a short-circuit of the positive (+) and negative (−) wires from the speaker terminals, the protection circuit functions and this indicator does not illuminate.

3 Power amplifier direct switch (power amp direct)

This switch is used to listen to the sound from a component connected to the "POWER AMP DIRECT" terminals.

When this switch is pressed inward to the "on" position, a superior level of tone quality can be obtained, because the signals from the component connected to the "POWER AMP DIRECT" terminals are sent directly to the volume control and power amp section of this unit. The mode selector, loudness switch, balance control and tone control circuit are bypassed.

4 Volume control/indicator (volume)

There are two types of volume scale indications: one for when the power amplifier direct switch is OFF, and one for when it is ON (Indicator will illuminate.).

5 Input selector (input selector)

This selector is used to select the sound source to be heard, such as a disc, radio broadcast, etc.

6 Recording output selector (rec selector)

This selector is used to select the sound source to be recorded by the connected tape deck 1 and/or tape deck 2 (or DAT).

7 Phono cartridge selector (phono selector)

This selector should be set to the position which corresponds to the type of cartridge used on the turntable.

8 Mode selector (mode)

This selector is used to select stereo or monaural operation.

9 Loudness switch (loudness)

This switch is used when listening to music at a low volume level. Auditory perception of sound in the low frequency range falls off at low volume, but when the switch is set to the "on" position, this deficiency is compensated for, so that the full impact of the musical performance can be enjoyed.

10 Tone control switch (tone control)

This switch is used to turn the tone control circuit (bass, treble) on or off.

11 Balance control (balance)

This control is used to adjust the left/right volume balance.

12 Tone controls (bass/treble)

The bass control is used to adjust the low-frequency sound range, and the treble control is used to adjust the high-frequency sound range.

13 Speaker selectors (speakers)

These selectors are used to turn the speaker systems on and off.

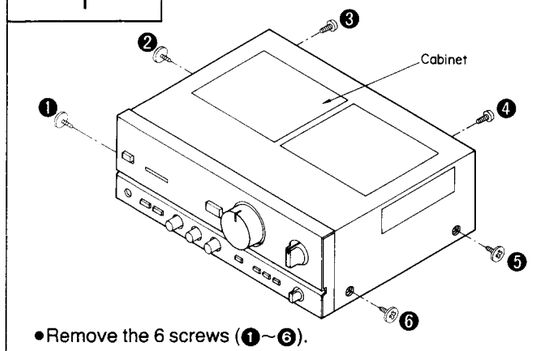
14 Headphones jack (phones)

■ DISASSEMBLY INSTRUCTIONS

"ATTENTION SERVICER"
Some chassis components may have sharp edges. Be careful when disassembling and servicing.

Ref. No. 1 — **Removal of the cabinet**

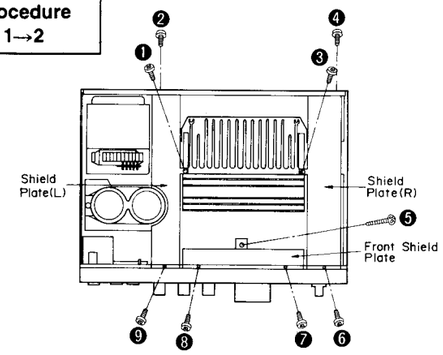
Procedure 1



●Remove the 6 screws (❶~❻).

Ref. No. 2 — **Removal of the shield plate (L)/(R) and front shield plate.**

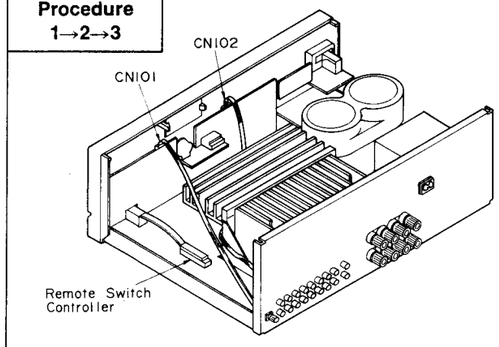
Procedure 1→2



●Remove the 9 screws (❶~❾).

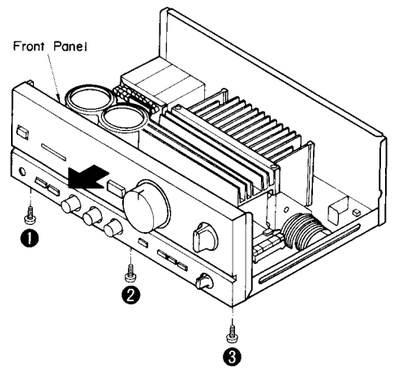
Ref. No. 3 — **Removal of the front panel**

Procedure 1→2→3



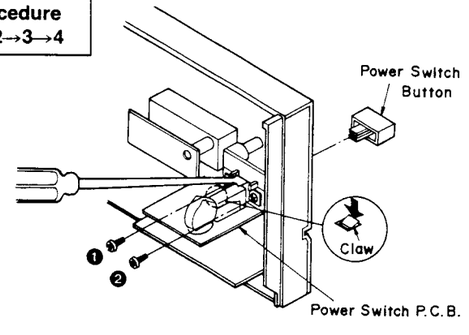
1. Remove the 2 connectors (CN101, CN102).
2. Remove the remote switch controller.

3. Remove the 3 screws (❶~❸).
4. Remove the front panel in the direction of the arrow.



Ref. No. 4 — **Removal of the power switch P.C.B.**

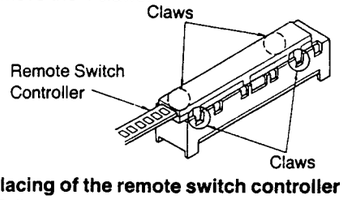
Procedure 1→2→3→4



1. Remove the 2 screws (❶, ❷).
2. Remove the power switch button by pushing it from behind the front panel.
3. Release the 1 claw.

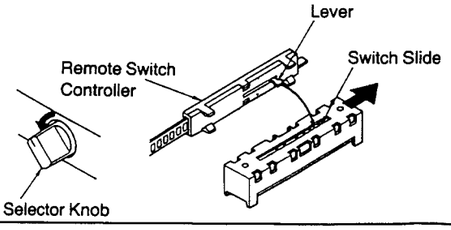
■ **Removal of the remote switch controller**

●Remove the 4 claws.



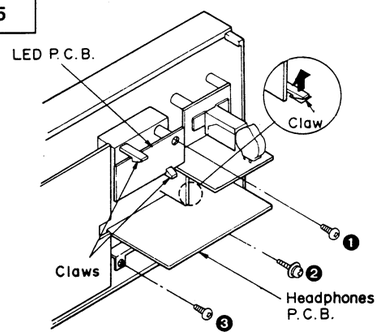
■ **Replacing of the remote switch controller**

1. Fully rotate the Recording Selector Control counterclockwise.
2. Push the Switch Slide in the direction of the arrow.



Ref. No. 5 — Removal of the LED P.C.B. and headphones P.C.B.

Procedure 1→2→3→5

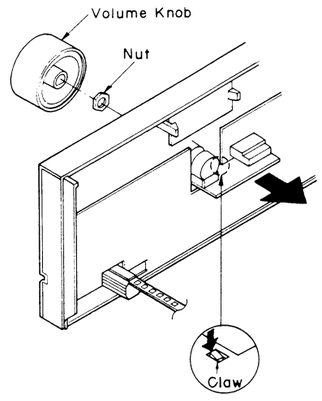


Removal of the LED P.C.B.
1. Remove the 1 screw (❶).
2. Release the 2 claws.

Removal of the headphones P.C.B.
1. Remove the 2 screws (❷, ❸).
2. Release the 1 claw.

Ref. No. 6 — Removal of the volume P.C.B.

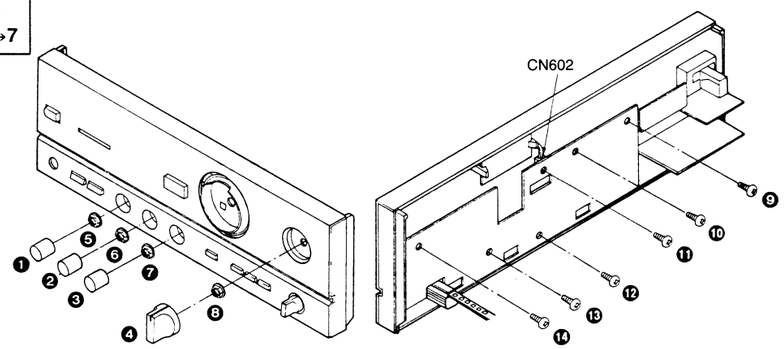
Procedure 1→2→3→6



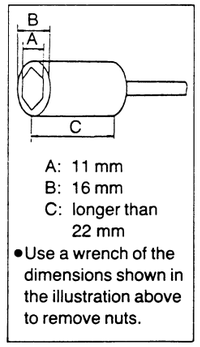
1. Pull out the volume knob.
2. Remove the nut.
3. Release the 1 claw.

Ref. No. 7 — Removal of the operation P.C.B.

Procedure 1→2→3→6→7



1. Pull out the 4 knobs (❶~❹).
2. Remove the 4 nuts (❺~❽).
3. Remove the 1 connector (CN602).
4. Remove the 6 screws (❾~⓮).

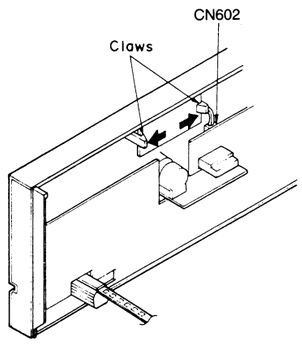


A: 11 mm
B: 16 mm
C: longer than 22 mm

- Use a wrench of the dimensions shown in the illustration above to remove nuts.

Ref. No. 8 — Removal of the volume LED P.C.B.

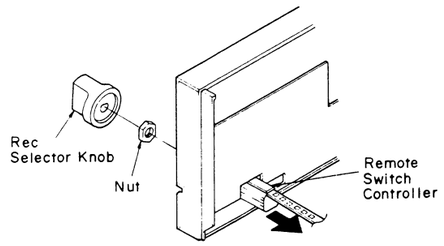
Procedure 1→2→3→7



1. Remove the 1 connector (CN602).
2. Release the 2 claws.

Ref. No. 9 — Removal of the remote switch controller

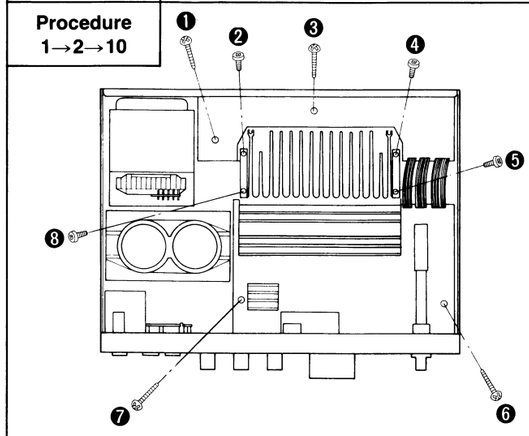
Procedure 1→2→3→8



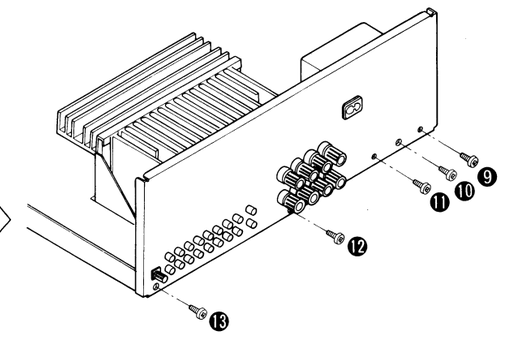
1. Pull out the rec selector knob.
2. Remove the nut.
3. Remove the remote switch controller in the direction of the arrow.

Ref. No. 10 — Check of the main P.C.B.

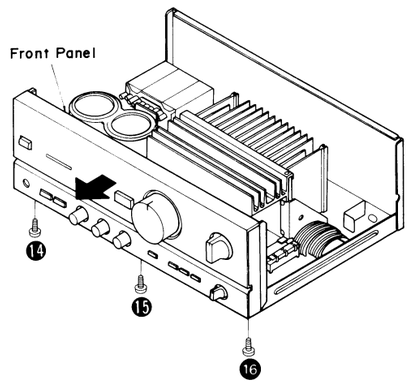
Procedure 1→2→10



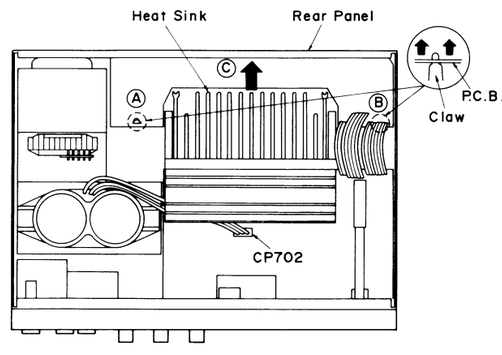
1. Remove the 8 screws (❶~❽).



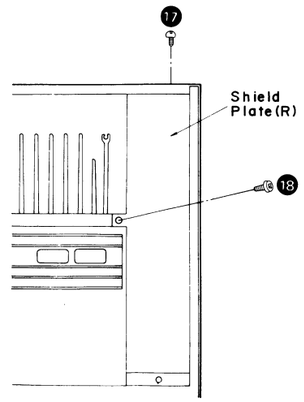
2. Remove the 5 screws (❾~⓭).



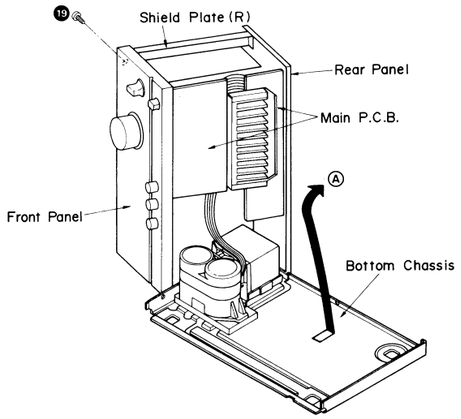
3. Remove the 3 screws (⓮~⓰).
4. Remove the front panel.



5. Remove the connector (CP702).
6. Loose sections Ⓐ and Ⓑ on the main P.C.B. and then release the claws of the bottom chassis and remove the rear panel.
7. Slide the heat sink in the direction of arrow Ⓒ.

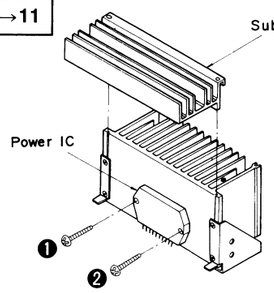


8. Install the shield plate (R) in the rear panel and the heat sink with the 2 screws (⓱ and ⓲).



9. Place the rear panel, the heat sink, the main P.C.B. and the front panel in the direction of arrow Ⓐ as shown.
10. Re-install the front panel in the main P.C.B. and then mount the shield plate (R) and fix it with the screw ⓳.

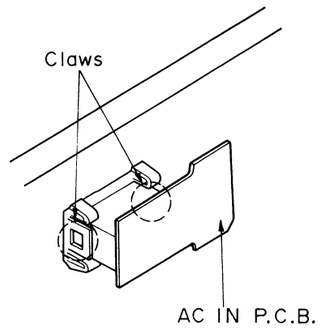
Ref. No. 11	Removal of the power IC
Procedure 1→2→10→11	



1. Remove the sub heat sink.
2. Remove the 2 screws (❶, ❷).

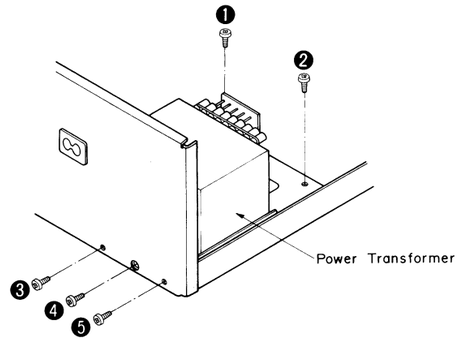
●When mounting the power IC and sub heat sink, apply silicon thermal compound (SZZ0L15 or equivalent) to the rear of the power IC.

Ref. No. 12	Removal of the AC IN P.C.B.
Procedure 1→2→12	



●Release the 2 claws.

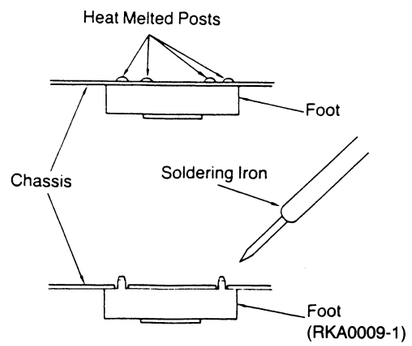
Ref. No. 13	Removal of the power transformer
Procedure 1→13	



●Remove the 5 screws (❶~❺).

●Replacement of the Foot.

1. Remove the 4 heat melted posts on the chassis with a pair of diagonal pliers or similar tool.
2. To mount the foot (RKA0009-1) on the chassis, melt the 4 posts with a soldering iron.



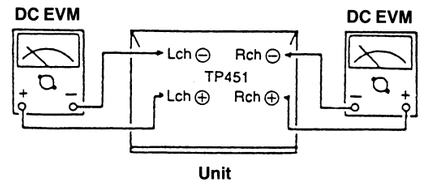
■ MEASUREMENTS AND ADJUSTMENTS

Control positions and equipment used.

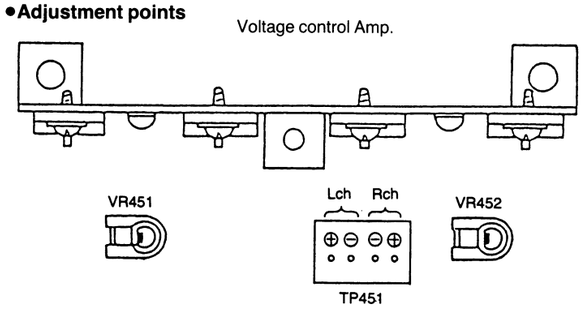
- Volume knob.....∞ (Minimum)
- Speaker selectors (A) switch ..... off
- Speaker selectors (B) switch ..... off
- Balance control knob 0

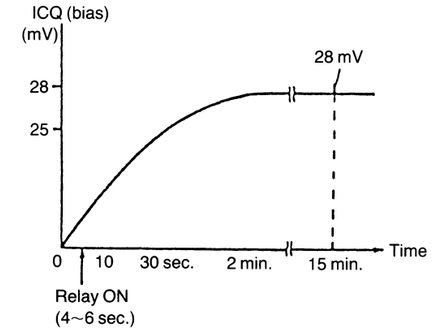
VOLTAGE CONTROL (V) AMP. IDLING (ICQ) ADJUSTMENT

1. Test equipment connection is shown in figure. (Connect the DC EVM on both channels.)
2. Completely turn the (V) amp. adjusting volumes (**VR451, VR452**) counter-clockwise.
3. Turn ON the set when it is cold, and 15 sec. later, adjust **VR451** and **VR452** so that the voltage is **25 mV**.
   Also, check that the voltage is **25~30 mV** (standard: **28 mV**) after lapse of **10–15 minutes**. (Below **30 mV** after lapse of **60 min.**)



●**Adjustment points**





■ SCHEMATIC DIAGRAM

(Parts list on pages 21, 22, 25, 26)

(This schem
developmen

Notes:

- ●S1 :
- ●S101 :
- ●S102 :
- ●S103-1 :
- ●S103-2 :
- ●S103-3 :
- ●S301 :
- ●S302 :
- ●S501-1 :
- ●S501-2 :

A PHONO EQ/TONE AMP CIRCUIT

C VOLUME CIRCUIT

D LED(VOLUME IND.) CIRCUIT

B MAIN CIRCUIT

SU-V670

10 11 12 13 14

(This schematic diagram may be modified at any time with the development of new technology.)

Notes:

- **•S1** : Power switch in **"on"** position.
- **•S101** : Input selector switch in **"phono"** position.
- **•S102** : Recording output selector switch in **"tape 2/ DAT►1"** position.
- **•S103-1** : Phono cartridge selector switch in **"MM"** position.
- **•S103-2** : Mode selector switch in **"stereo"** position.
- **•S103-3** : Loudness switch in **"off"** position.
- **•S301** : Tone control switch in **"defeat"** position.
- **•S302** : Power amplifier direct switch in **"off"** position.
- **•S501-1** : Speaker **(A)** selector switch in **"off"** position.
- **•S501-2** : Speaker **(B)** selector switch in **"off"** position.
- ——— : Positive voltage lines.
- - - - : Negative voltage lines.
- : Phono Signal (Lch)
- : Recording Signal

•Indicated voltage values are the standard values for the unit measured by the DC electronic circuit tester (high-impedance) with the chassis taken as standard. Therefore, there may exist some errors in the voltage values, depending on the internal impedance of the DC circuit tester.

Important safety notice:

Components identified by ⚠ mark have special characteristics important for safety. When replacing any of these components, use only manufacturer's specified parts.

•Caution!

IC and LSI are sensitive to static electricity.

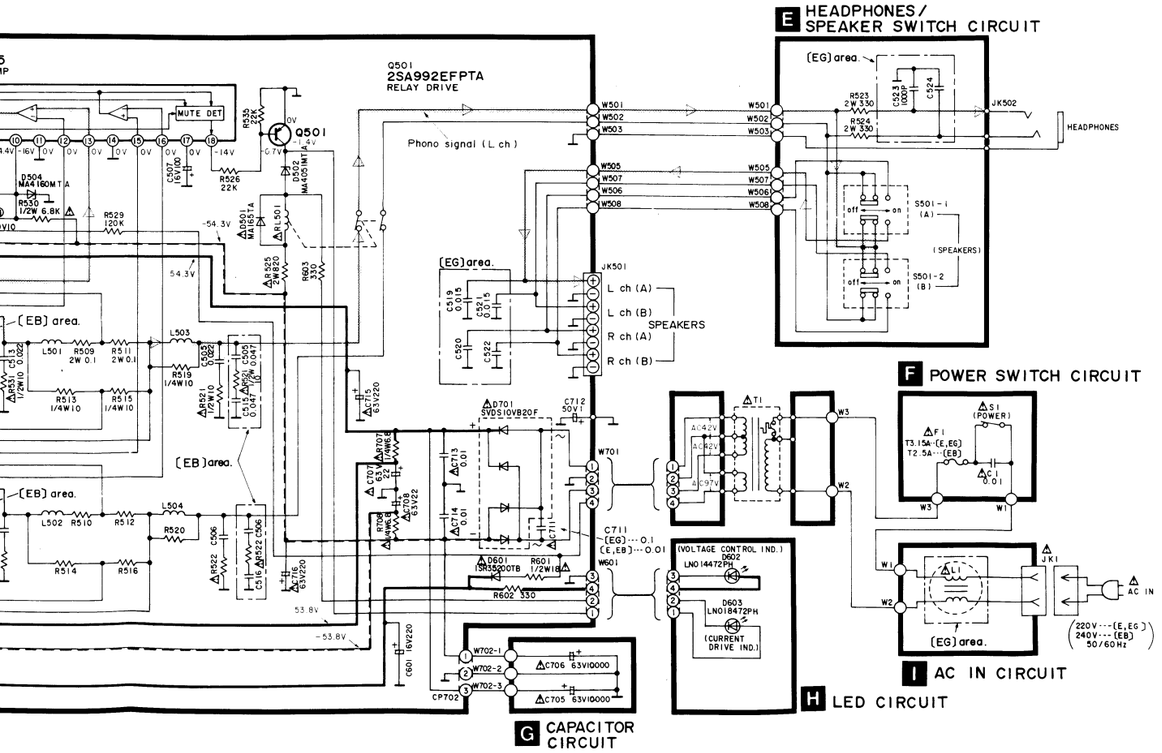
Secondary trouble can be prevented by taking care during repair.

•Cover the parts boxes made of plastics with aluminum foil.

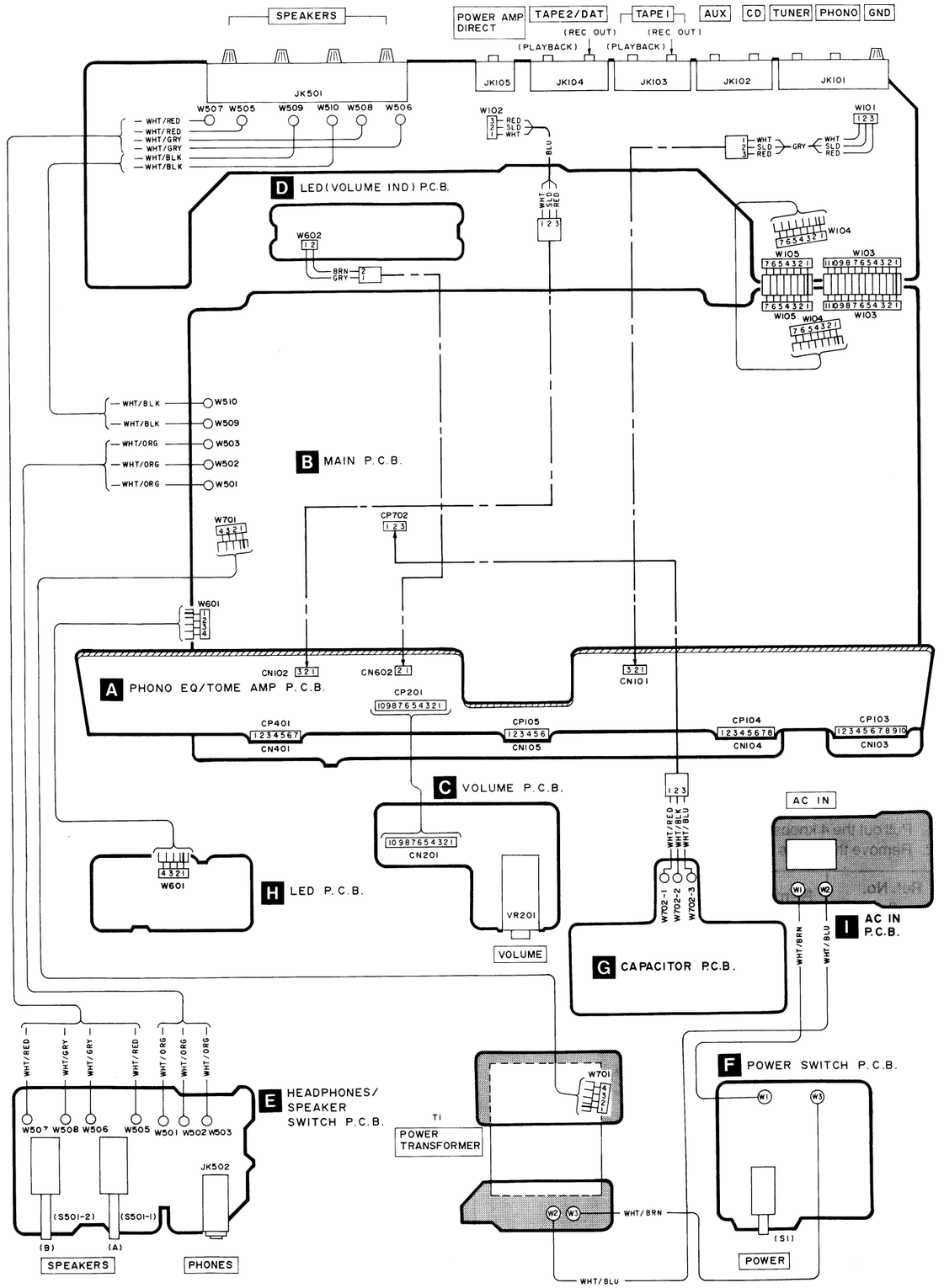
•Ground the soldering iron.

•Put a conductive mat on the work table.

•Do not touch the legs of IC or LSI with the fingers directly.

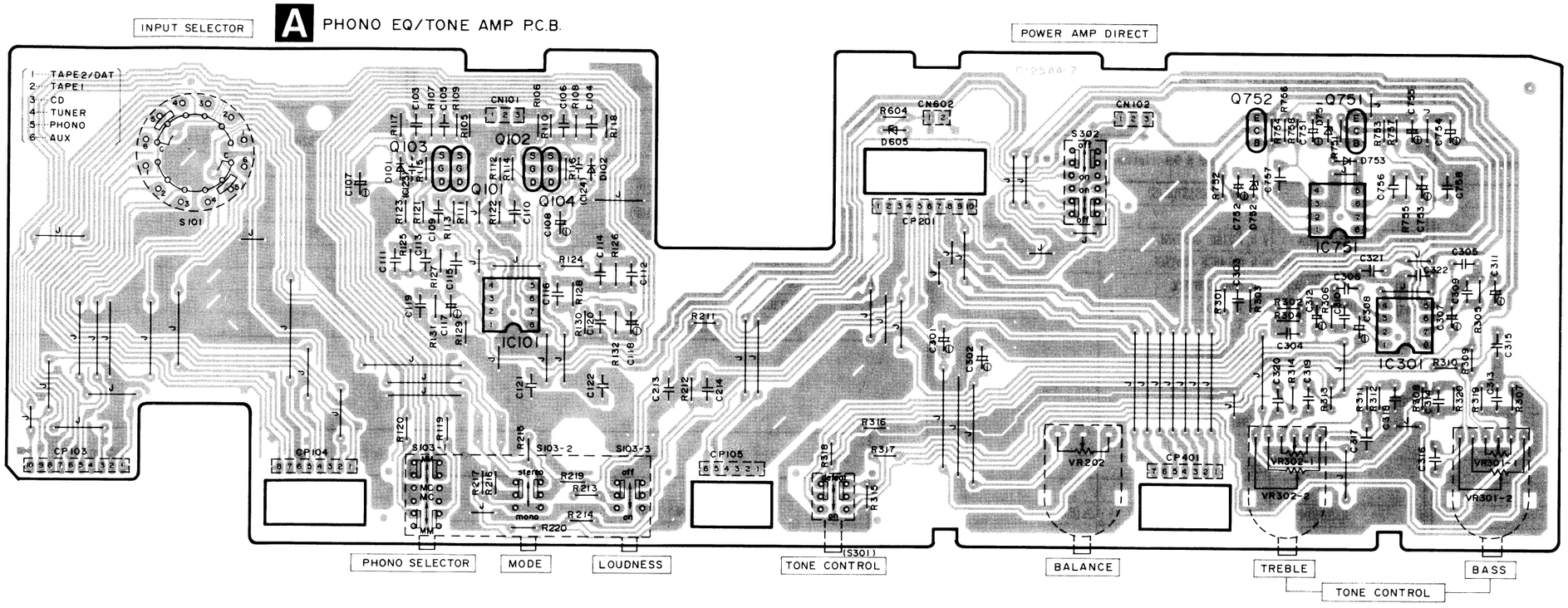


■ WIRING CONNECTION DIAGRAM

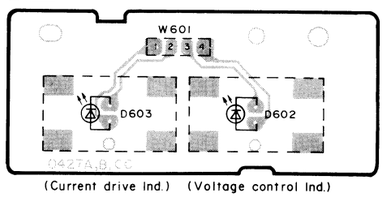


■ PRINTED CIRCUIT BOARDS (Parts list on pages 21, 22, 25, 26)

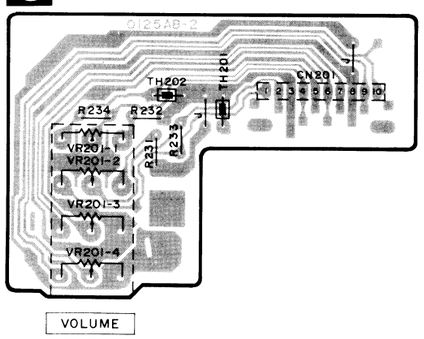
A PHONO EQ/TONE AMP P.C.B.



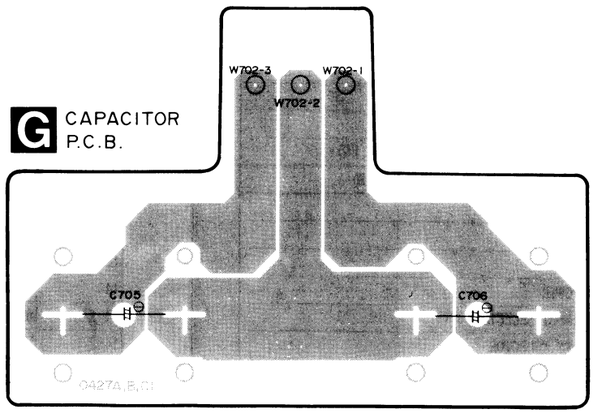
H LED P.C.B.



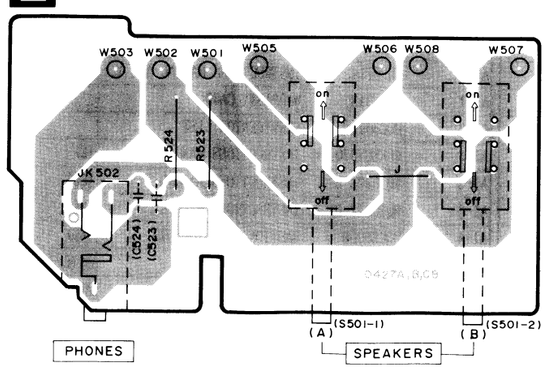
C VOLUME P.C.B.



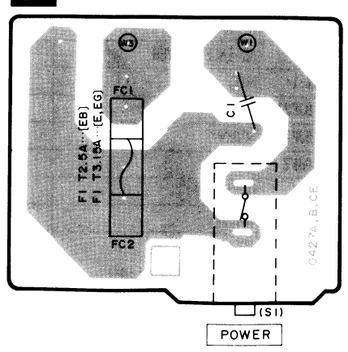
G CAPACITOR P.C.B.



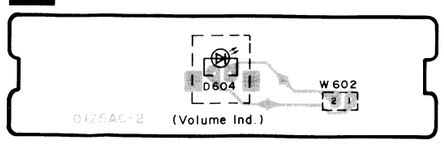
E HEADPHONES/SPEAKER SWITCH P.C.B.



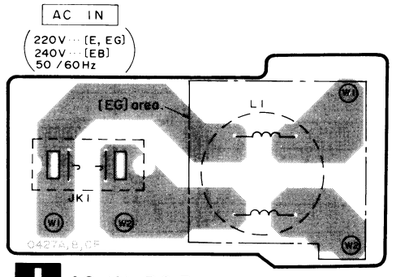
F POWER SWITCH P.C.B.

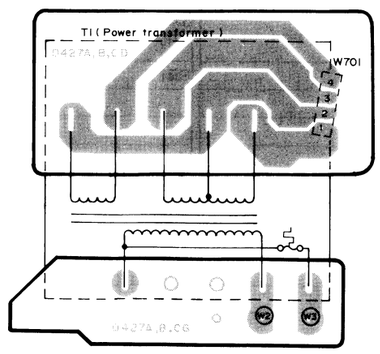


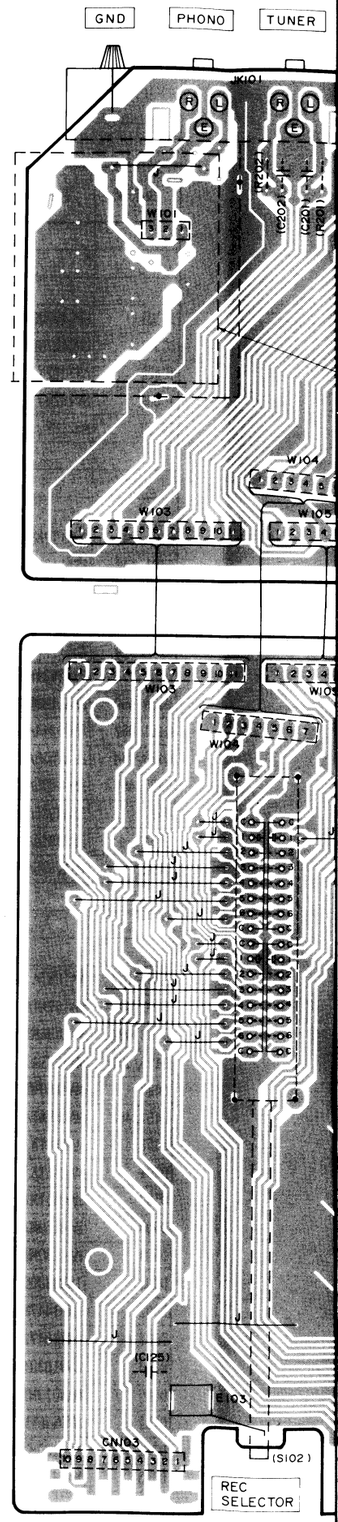
D LED (VOLUME IND.) P.C.B.

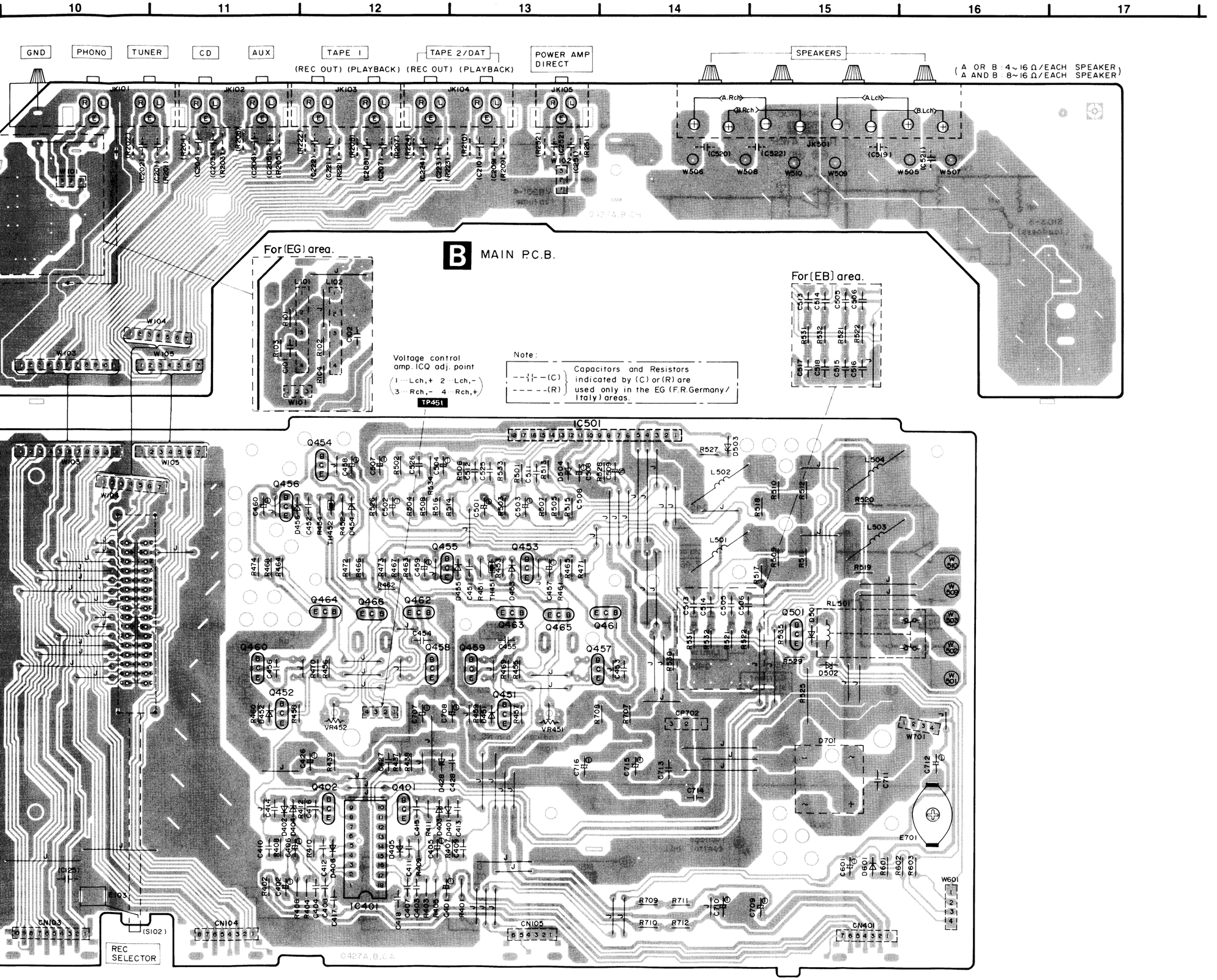


I AC IN P.C.B.

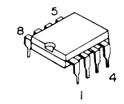
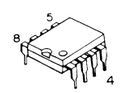
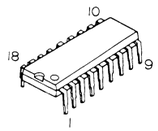
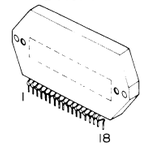
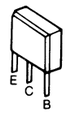
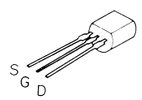
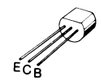
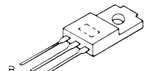
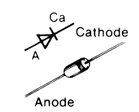
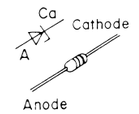
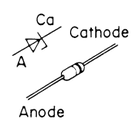
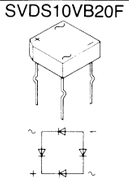
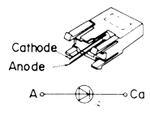
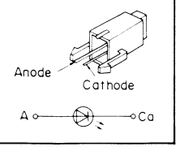




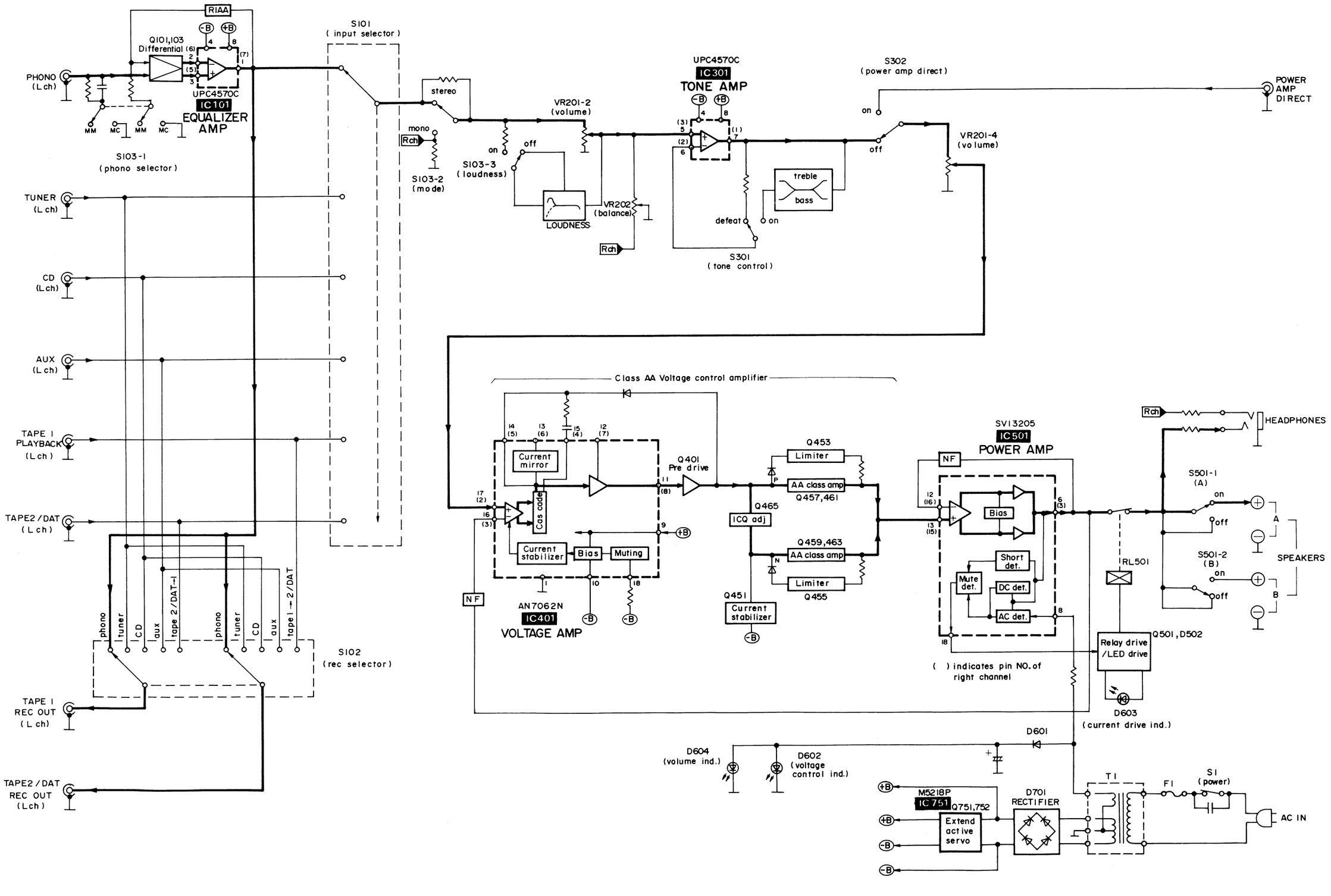




■ TERMINAL GUIDE OF IC'S, TRANSISTORS AND DIODES

M5218P 	UPC4570C 
AN7062N 	SVI3205 
2SC3311AQSTA 2SA1309AQSTA 	2SK170BL 
2SA1123RSTA 2SC1685NCQRS 2SC2631RSTTA 2SA992EFPTA 	2SC3944AQRS 2SA1535AQRS 
	MA165TA MA167ATA MA29WATA 1SR35200TB
	MA4033MTA MA4080MTA MA4036MTA MA4051MTA
MA4160MTA 	SVDS10VB20F 
LN014472PH LN018472PH 	LN018304P 

■ BLOCK DIAGRAM



■ REP

Notes : *

*

Ref. No.	Pa
IC101	UPC45
IC301	UPC45
IC401	AN706
IC501	SVI32
IC751	M5218
Q101-104	2SK17
Q401, 402	2SA11
Q451, 452	2SC2
Q453, 454	2SC33
Q455, 456	2SA13
Q457, 458	2SC2
Q459, 460	2SA1
Q461, 462	2SC3
Q463, 464	2SA1
Q465, 466	2SC1
Q501	2SA9
Q751	2SC3
Q752	2SA1
D101, 102	MA16
D401, 402	MA16
D403, 404	MA40
D405, 406	MA16
D428	MA41
D451, 452	MA29
D453-456	MA16
D501	MA16
D502	MA40
D503	MA41
D504	MA41
D601	1SR3
D602	LN01
D603	LN01
D604	LN01
D605	MA40
D701	SVDS
D751, 752	MA41
D753	MA16

■ REPLACEMENT PARTS LIST

Notes : * Important safety notice:
Components identified by ⚠ mark have special characteristics important for safety. When replacing any of these components use only manufacturer's specified parts.
* The parenthesized indications in the Remarks columns specify the areas. (Refer to the cover page for area.)
Parts without these indications can be used for all areas.

Ref. No.	Part No.	Part Name & Description	Remarks
		INTEGRATED CIRCUIT(S)	
IC101	UPC4570C	IC, PHONO/EQ AMP.	
IC301	UPC4570C	IC, TONE AMP.	
IC401	AN7062N	IC, VOLTAGE AMP.	⚠
IC501	SVI3205	IC, POWER AMP.	⚠
IC751	M5218P	IC, ACTIVE SERVO	
		TRANSISTOR(S)	
Q101-104	2SK170BL	TRANSISTOR	
Q401, 402	2SA1123RSTTA	TRANSISTOR	
Q451, 452	2SC2631RSTTA	TRANSISTOR	
Q453, 454	2SC3311AQSTA	TRANSISTOR	
Q455, 456	2SA1309AQSTA	TRANSISTOR	
Q457, 458	2SC2631RSTTA	TRANSISTOR	⚠
Q459, 460	2SA1123RSTTA	TRANSISTOR	⚠
Q461, 462	2SC3944AQRS	TRANSISTOR	⚠
Q463, 464	2SA1535AQRS	TRANSISTOR	⚠
Q465, 466	2SC1685NCQRS	TRANSISTOR	
Q501	2SA992EFPTA	TRANSISTOR	
Q751	2SC3944AQRS	TRANSISTOR	
Q752	2SA1535AQRS	TRANSISTOR	
		DIODE(S)	
D101, 102	MA165TA	DIODE	
D401, 402	MA167ATA	DIODE	
D403, 404	MA4036MTA	DIODE	⚠
D405, 406	MA165TA	DIODE	
D428	MA4160MTA	DIODE	
D451, 452	MA29WATA	DIODE	⚠
D453-456	MA165TA	DIODE	
D501	MA165TA	DIODE	⚠
D502	MA4051MTA	DIODE	
D503	MA4160MTA	DIODE	⚠
D504	MA4160MTA	DIODE	
D601	1SR35200TB	DIODE	⚠
D602	LN014472PH	LED	
D603	LN018472PH	LED	
D604	LN018304P	LED	
D605	MA4033MTA	DIODE	
D701	SVDS10VB20F	DIODE	⚠
D751, 752	MA4180MTA	DIODE	
D753	MA165TA	DIODE	

Ref. No.	Part No.	Part Name & Description	Remarks
		VARIABLE RESISTOR(S)	
VR201	RRV16J01A	V. R, VOLUME CONTROL	
VR202	EWHFDA014G15	V. R, BALANCE CONTROL	
VR301, 302	EWC2XA000C15	V. R, TONE CONTROL	
VR451, 452	EVNDXAA00B52	V. R, ICQ ADJ.	
		THERMISTOR(S)	
TH201, 202	ERTD2ZHL104T	THERMISTOR	
TH451, 452	ERTD2ZHL104T	THERMISTOR	
		COIL(S)	
L1	SLQZ650MH49	COIL	⚠(EG)
L101, 102	SLM1Z33	COIL	(EG)
L501-504	SLQY18G-10	COIL	
		TRANSFORMER(S)	
T1	RFKCUV670E-K	POWER TRANSFORMER	⚠(E, EG)
T1	RFKCUV670EBK	POWER TRANSFORMER	⚠(EB)
		FUSE(S)	
F1	XBA2C31TB0	FUSE 250V T3.15A	⚠(E, EG)
F1	XBA2C25TB0	FUSE 250V T2.5A	⚠(EB)
		SWITCH(ES)	
S1	ESB8249V	SW, POWER	⚠
S101	RSR6B001	SW, INPUT SELECTOR	
S102	RSS6D001	SW, REC SELECTOR	
S103	ESB68106	SW, MODE/LOUDNESS/PHONO	
S301	ESB68107	SW, TONE CONTROL	
S302	ESB68109	SW, POWER AMP DIRECT	
S501	RSP2002	SW, SPEAKER SELECTOR	
		JACK(S)	
JK1	SJS9231-1B	AC INLET	⚠
JK101	SJF3067NJ	TERMINAL BOARD	
JK102-104	SJF3069N	TERMINAL BOARD	
JK105	SJF3068NJ	TERMINAL BOARD	
JK501	SJF4819	SP TERMINAL	
JK502	SJJD19	HEADPHONES JACK	
CN101, 102	SJT3321	CONNECTOR(3P)	

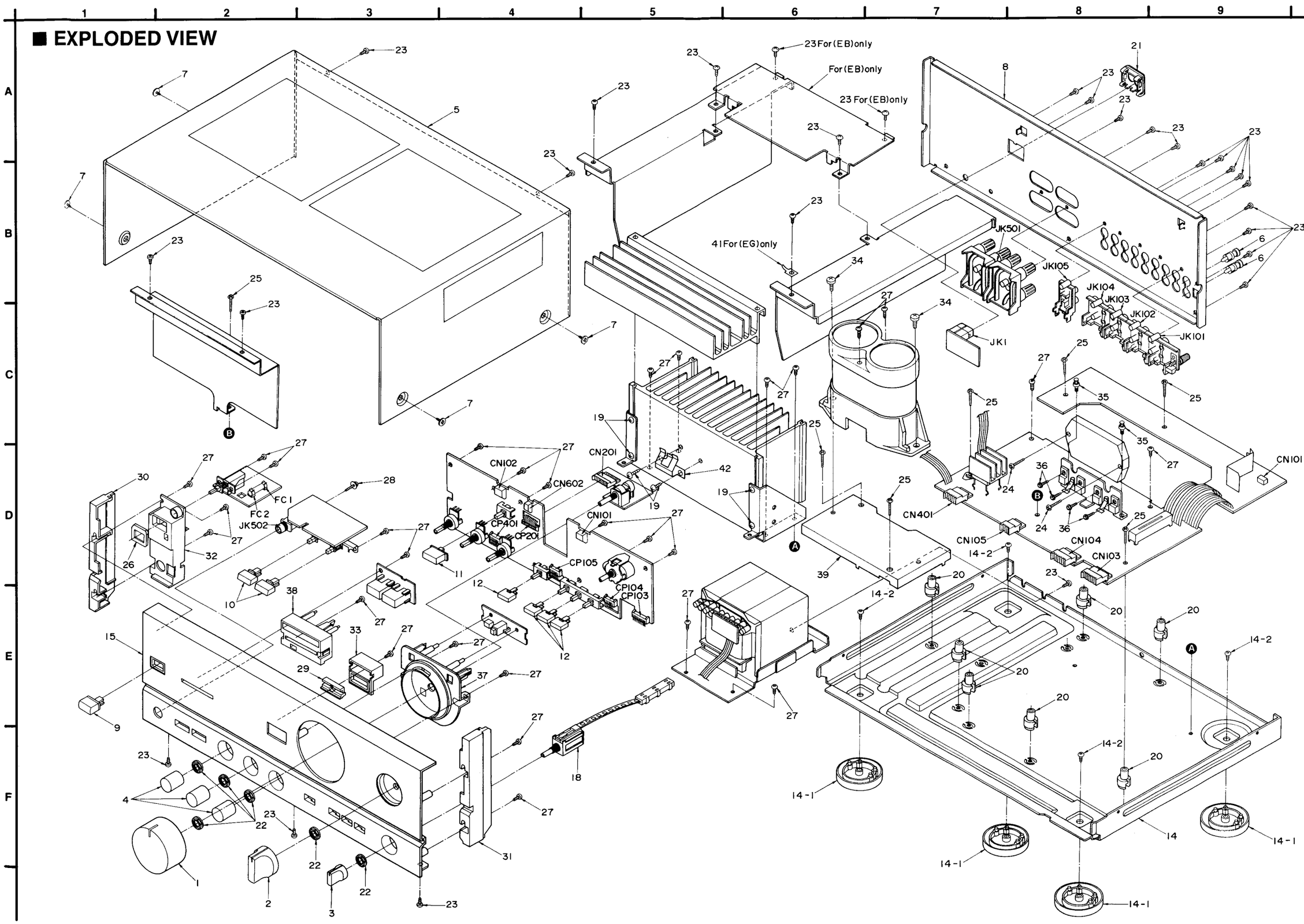
Ref. No.	Part No.	Part Name & Description	Remarks
CN103	SJS51080WL	SOCKET(10P)	
CN104	SJS50880WL	SOCKET(8P)	
CN105	SJS50680WL	SOCKET(6P)	
CN201	SJS51080WL	SOCKET(10P)	
CN401	SJS50780WL	SOCKET(7P)	
CN602	SJT3215	CONNECTOR(2P)	
CP103	SJT31047WL	CONNECTOR(10P)	
CP104	SJT30847WL	CONNECTOR(8P)	
CP105	SJT30647WL	CONNECTOR(6P)	
CP201	SJT31047WL	CONNECTOR(10P)	
CP401	SJT30747WL	CONNECTOR(7P)	
CP702	RJP1A3303	CONNECTOR(3P)	

Ref. No.	Part No.	Part Name & Description	Remarks
		FUSE HOLDER	
FC1, 2	EYF52BC	FUSE HOLDER	⚠
		RELAY	
RL501	SSY126	RELAY	⚠

Ref. No.	Part No.	Part Name & Description	Remarks
		CABINET PARTS	
1	RGW0002-2K	VOLUME KNOB	
2	RGW0029-K	INPUT SELECT KNOB	
3	RGW0027-2K	REC SELECT KNOB	
4	RGW0030-K	BALANCE/TONE KNOB	
5	RKM0041-K	CABINET	
6	SJPA11-1	SHORT PIN	
7	SNE2129-1	SCREW	
8	RGR0021A-E	REAR PANEL	(E)
8	RGR0021A-G	REAR PANEL	(EB)
8	RGR0021A-F	REAR PANEL	(EG)
9	RGU0030	POWER BUTTON	
10	RGU0118-K	SPEAKER BUTTON	
11	RGU0119-K	DIRECT BUTTON	
12	RGU0120-K	SIGNAL BUTTON	
14	RFKJUV670E-K	CHASSIS ASS'Y	
14-1	RKA0009-1	FOOT	
14-2	XTB3+6J	SCREW	
15	RFKGUV670E-K	FRONT PANEL ASS'Y	
18	RSQ0004	REC SELECTOR	
19	XTB3+8J	SCREW	
20	SHE187-2	HOLDER	
21	SJS9231A	AC INLET COVER	
22	SNE4021-1	NUT	
23	XTBS3+8JFZ1	SCREW	
24	XTB3+16JFZ	SCREW	
25	XTB3+20JFZ	SCREW	
26	RGQ0006-1	ORNAMENT	
27	XTB3+8JFZ	SCREW	
28	XTWS3+8T	SCREW	
29	RGK0097	ORNAMENT (GOLD LINE)	
30	RGK0109-K	SIDE ORNAMENT (L)	

Ref. No.	Part No.	Part Name & Description	Remarks
31	RGK0108-K	SIDE ORNAMENT (R)	
32	RMR0144	HOLDER	
33	RMR0137-K	HOLDER	
34	XTB4+10FFZ	SCREW	
35	SHR415	LATCH	
36	XTW3+8T	SCREW	
37	RFKNUV570EK1	VOLUME ORNAMENT	
38	RFKNUV470EK2	INDICATOR ORNAMENT	
39	RMN0083	BASE	
41	SUS890	SPRING	(EG)
42	RMC0032	SPRING	
		PACKING MATERIAL	
P1	RPG0554	CARTON BOX	
P2	SPS5185	PAD(POWER CORD)	
P3	SPS5257-2	PAD(FRONT)	
P4	SPS5258-2	PAD(REAR)	
P5	SPP701	PROTECTION COVER	
		ACCESSORIES	
A1	RQF0712	INSTRUCTIONS MANUAL ASS'Y	(E)
A1	RQF0713	INSTRUCTIONS MANUAL ASS'Y	(EB)
A1	RQF0714	INSTRUCTIONS MANUAL ASS'Y	(EG)
A1-1	RQA0013	WARRANTY CARD	
A1-2	RQCB0169	SERVICENTOR LIST	
A1-3	RFKSUV670E-K	INSTRUCTIONS MANUAL	(E)
A1-3	RQT0708-B	INSTRUCTIONS MANUAL	(EB)
A1-3	RQT0617-D	INSTRUCTIONS MANUAL	(EG)
A1-4	RQCS0009	CAUTION NOTE for FTZ	(EG)
A2	SFDAC05E03	POWER CORD	⚠(E, EG)
A2	SJA193	POWER CORD	⚠(EB)

■ EXPLODED VIEW



Notes : * Capacity valuse are in microfarads (uF) unless specified otherwise, P=Pico-farads(pF) F=Farads(F)
* Resistance values are in ohms, unless specified otherwise, 1K=1,000(OHM) , 1M=1,000k(OHM)

Ref. No.	Part No.	Values & Remarks
		RESISTORS
R101-104	ERDS2TJ102T	1/4W 1K (EG)
R105, 106	ERDS2TJ473T	1/4W 47K
R107, 108	ERDS2TJ221T	1/4W 220
R109, 110	ERDS2TJ220T	1/4W 22
R111-116	FSR25TJ332T2	1/4W 3.3K
R117, 118	ERDS2TJ151T	1/4W 150
R119, 120	ERDS2TJ100T	1/4W 10
R121, 122	ERDS2TJ101T	1/4W 100
R123, 124	ERDS2TJ151T	1/4W 150
R125, 126	ERDS2TJ682T	1/4W 6.8K
R127, 128	ERDS2TJ823T	1/4W 82K
R129, 130	ERDS2TJ334T	1/4W 330K
R131, 132	ERDS2TJ561T	1/4W 560
R201, 202	ERDS2TJ102T	1/4W 1K (EG)
R203, 204	ERDAS3G102T	1/4W 1K (EG)
R205-210	ERDS2TJ102T	1/4W 1K (EG)
R211, 212	ERDAS3G223T	1/4W 22K
R213, 214	ERDS2TJ183T	1/4W 18K
R215, 216	ERDS2TJ332T	1/4W 3.3K
R217	ERDS2TJ824T	1/4W 820K
R219, 220	ERDAS3G272T	1/4W 2.7K
R221-224	ERDS2TJ471T	1/4W 470 (EG)
R231, 232	ERDAS3G472T	1/4W 4.7K
R233, 234	ERDAS3G124T	1/4W 120K
R251, 252	ERDAS3G102T	1/4W 1K (EG)
R301, 302	ERDAS3G561T	1/4W 560
R303, 304	ERDS2TJ823T	1/4W 82K
R305, 306	ERDS2TJ224T	1/4W 220K
R307, 308	ERDS2TJ392T	1/4W 3.9K
R309, 310	ERDS2TJ223T	1/4W 22K
R311, 312	ERDS2TJ102T	1/4W 1K
R313, 314	ERDS2TJ562T	1/4W 5.6K
R315, 316	ERDAS3G392T	1/4W 3.9K
R317, 318	ERDAS3G223T	1/4W 22K
R319, 320	ERDS2TJ183T	1/4W 18K
R401, 402	ERDS2TJ122T	1/4W 1.2K
R403, 404	ERDS2TJ823T	1/4W 82K
R405, 406	ERDAS3G272T	1/4W 2.7K
R407, 408	ERDAS3G823T	1/4W 82K
R409, 410	ERDS2TJ561T	1/4W 560
R411, 412	ERDFS2VJ470T	1/4W 47 ⚠
R437	ERDS2TJ473T	1/4W 47K ⚠
R438	ERDS1FVJ682T	1/2W 6.8K ⚠
R439	ERDFS2VJ470T	1/4W 47 ⚠
R451, 452	ERDS2TJ182T	1/4W 1.8K
R453, 454	ERDS2TJ393T	1/4W 39K

Ref. No.	Part No.	Values & Remarks
R455, 456	ERDS2TJ391T	1/4W 390
R457, 458	ERDS2TJ823T	1/4W 82K ⚠
R459, 460	ERDFS2VJ101T	1/4W 100 ⚠
R461-464	ERDS2TJ223T	1/4W 22K ⚠
R465-468	ERDFS2VJ101T	1/4W 100
R469, 470	ERDFS2VJ821T	1/4W 820
R471-474	ERDFS2VJ2R2T	1/4W 2.2
R501, 502	ERD25FVJ362T	1/4W 3.6K ⚠
R503, 504	ERDFS2VJ121T	1/4W 120
R505, 506	ERDFS2VJ392T	1/4W 3.9K
R507, 508	ERDFS2VJ121T	1/4W 120
R509-512	RREEMKR10SC	2W 0.1
R513-516	ERDFS2VJ100T	1/4W 10
R517, 518	ERDFS2VJ1R0T	1/4W 1
R519, 520	ERDFS2VJ100T	1/4W 10
R521, 522	ERDS1FVJ100T	1/2W 10 ⚠
R523, 524	ERG2SJ331H	2W 330
R525	ERG2SJ821H	2W 820 ⚠
R526	ERDS2TJ223T	1/4W 22K
R527	ERDS2TJ223T	1/4W 22K ⚠
R528	ERDS2TJ824T	1/4W 820K
R529	ERDS2TJ124T	1/4W 120K
R530	ERDS1FVJ682T	1/2W 6.8K ⚠
R531, 532	ERDS1FVJ100T	1/2W 10 ⚠
R533, 534	ERDS2TJ182T	1/4W 1.8K
R535	ERDS2TJ223T	1/4W 22K
R601	ERDS1FVJ180T	1/2W 18 ⚠
R602, 603	ERDS2TJ331T	1/4W 330
R604	ERDS2TJ471T	1/4W 470
R707, 708	ERDFS2VJ6R8T	1/4W 6.8 ⚠
R709, 710	ERDFS2VJ470T	1/4W 47 ⚠
R711, 712	ERDFS2VJ331T	1/4W 330 ⚠
R751, 752	ERDS2TJ223T	1/4W 22K
R753	ERDS2TJ102T	1/4W 1K
R754	ERDS2TJ153T	1/4W 15K
R755	ERDS2TJ823T	1/4W 82K
R756	ERDS2TJ153T	1/4W 15K
R757, 758	ERDS2TJ102T	1/4W 1K
		CAPACITORS
C1	ECKWKC103PF2	400V 0.01U ⚠
C101, 102	ECBT1H120J5	50V 12P (EG)
C103, 104	ECKR1H103ZF5	50V 0.01U
C105, 106	ECBT1H820KB5	50V 82P
C107, 108	ECEA0JU222E	6.3V 2200U
C109, 110	ECQM1H222KV3	50V 2200P
C111, 112	ECQM1H122KV3	50V 1200P
C113, 114	ECQM1H103KV3	50V 0.01U

Ref. No.	Part No.	Values & Remarks
C115, 116	ECQV1H393JZ3	50V 0.039U
C117, 118	UES1H010M1TA	50V 1U
C119, 120	ECQM1H472KV3	50V 4700P
C121, 122	ECKR1H472KB5	50V 4700P
C123, 124	ECBT1H270J5	50V 27P (EG)
C125	ECBT1H820KB5	50V 82P (EG)
C201-210	ECBT1H101KB5	50V 100P (EG)
C213, 214	ECQV1H563JZ3	50V 0.056U
C221-224	ECBT1H181KB5	50V 180P (EG)
C251, 252	ECBT1H101KB5	50V 100P (EG)
C301, 302	ECA1HPXS3R3B	50V 3.3U
C303, 304	ECBT1H101KB5	50V 100P
C305, 306	ECBT1H820KB5	50V 82P
C307, 308	ECA1HPXS4R7B	50V 4.7U
C309, 310	ECBT1H390J5	50V 39P
C311, 312	ECA1CPXS100B	16V 10U
C313, 314	ECQV1H823JZ3	50V 0.082U
C315, 316	ECQM1H153KV3	50V 0.015U
C317, 318	ECQM1H183KV3	50V 0.018U
C319, 320	ECQM1H182KV3	50V 1800P
C321, 322	ECKR1H103ZF5	50V 0.01U
C401, 402	ECA1HPXS3R3B	50V 3.3U
C403, 404	ECBT1H271KB5	50V 270P
C405, 406	ECA1CPXS220B	16V 22U
C407, 408	ECBT1H820KB5	50V 82P
C409, 410	ECBT1H100J5	50V 10P
C411, 412	ECBT1H681KB5	50V 680P
C413, 414	ECCR2H070D5	500V 7P
C415, 416	ECBT1H102KB5	50V 1000P ⚠
C417, 418	ECBT1H102KB5	50V 1000P
C427, 428	ECKR1H223ZF5	50V 0.022U
C429	ECEA1JU220B	63V 22U ⚠
C451, 452	ECKR1H333ZF5	50V 0.033U
C453-456	ECCR2H680K5	500V 68P ⚠
C457, 458	ECEA1HK010B	50V 1U
C459, 460	ECEA1HK2R2B	50V 2.2U
C501-504	ECA0JPXS101B	6V 100U
C505, 506	ECKR1H223ZF5	50V 0.022U (E, EG)
C505, 506	ECKR1H473ZF5	50V 0.047U (EB)
C507	ECEA1CU101B	16V 100U
C508	ECEA1HU470B	50V 47U
C509	ECEA1HN100SB	50V 10U
C511, 512	ECBT1H180J5	50V 18P
C513, 514	ECKR1H223ZF5	50V 0.022U (E, EG)
C513, 514	ECKR1H473ZF5	50V 0.047U (EB)
C515-518	ECKR1H473ZF5	50V 0.047U (EB)
C519-522	ECQM1H153KV3	50V 0.015U (EG)
C523, 524	ECBT1H102KB5	50V 1000P (EG)
C525, 526	ECQB1H272JZ3	50V 2700P

Ref. No.	Part No.	Values & Remarks
C601	ECEA1CU221B	16V 220U
C705, 706	ECED1JM103T	63V 10000U ⚠
C707, 708	ECEA1JU220B	63V 22U ⚠
C709, 710	ECEA1JU220B	63V 22U
C711	ECKR2H103ZU	500V 0.01U ⚠ (E, EB)
C711	ECQE2104KF3	250V 0.1U ⚠ (EG)
C712	ECEA1HK010B	50V 1U
C713, 714	ECHR1H103JZ3	50V 0.01U ⚠
C715, 716	ECA1JPXS221E	63V 220U ⚠
C751-753	ECA1EPXS100B	25V 10U
C754, 755	ECA1HPXS3R3B	50V 3.3U
C756	ECBT1H821KB5	50V 820P
C757, 758	ECKR1H103ZF5	50V 0.01U

Printed in Japan
F900508200 TW/FF/YY